

ON SOME NEW SPECIES OF AUSTRALIAN MARINE GASTROPODA.

By PROFESSOR RALPH TATE.

PLATE I.

[Read June 6, 1893.]

Sipho (?) mimeticus, *spec. nov.* Pl. i., fig. 10.

Shell pyriform, imperforate, uniformly sordid-white, whorls four and a-half, suture distinct but not canaliculate; embryo of one and a-half turns, naticiform, smooth; first spire-whorl and anterior-half of second angulated medially; the rest angulated over the suture, flatly-convex behind, with five revolving threads at the posterior suture a double thread which is slightly crenulated by oblique slender costæ fading-off anteriorly into threads.

Body-whorl ventricose in front of the periphery, periphery ornamented with subacute nodulose crenatures (about twelve), posterior area slightly concave with five raised threads finely and closely elevate-striated in the intervals, at the suture a thickened lira which is slightly crenulated; anterior part of body-whorl with raised threads, which are more or less equal and equidistant.

Aperture rhomboid-oval; outer lip smooth within; columella covered with a thin callus, regularly concave; the base is gradually contracted into a moderately-elongated snout, nearly as long as the aperture, bent to the left and slightly upturned.

Dimensions.—Total length, 15·5; greatest diameter, 8·5; length of aperture, 12; width of aperture, 4.

Habitat.—Dredged by Mr. E. H. Matthews, on December 31, 1888, from a sandy bottom on Tapley's Shoal, about eight miles off Edithburgh, in 12 to 16 fathoms (one dead specimen).

Affinity.—This shell is probably immature and its generic location is uncertain. It has a general resemblance to *Pulgur canaliculatus*, Linn., from the young of which it is separable by its more ventricose body-whorl, shorter and more tortuous snout, and generically by the absence of a columella-fold. It bears a resemblance to some species of *Sycum*, though the form of the embryo and the smooth test in that genus prohibit its attachment thereto. It is also like *Streptosiphon porphyrostoma*, which has, however, an oblique double fold on the columella.

Taking separately the conchological characters of this shell

not one of them will exclude it from *Sipho*, though the facies is not proper to this genus; here I tentatively place it, awaiting fuller material to determine its proper classificatory position.

Columbella (Mitrella) vineta, *spec. nov.* Pl. i., fig. 11.

Shell small, narrowly oval, shining light-horn (dead shells white) with a *revolving red or brown band* next to the anterior suture. Nuclear whorls one and a-half, smooth, globose, with a small blunt tip. Spire-whorls five, very slightly convex (abruptly but feebly so at the posterior suture). Aperture oval, outer lip 7-dentate within.

Dimensions.—Height, 9·5 to 10; diameter, 4·25.

Localities.—Fowler and Streaky Bays, Middleton, and Cape Northumberland, S. Australia; also north coast of Tasmania.

This species in respect of coloration is readily recognised by its brown band, which though of variable width is always margined with white at the posterior suture; the band is usually uninterrupted, but is occasionally scalloped at its posterior margin, or at both margins on the body-whorl. In shape and size it is near *C. dictua*, Ten.-Woods, but is narrower, and the whorls are not so flat; also near *C. lineolata*, Pease, but is much narrower. The proportion of height to width is, in *C. vineta*, 100 to 45 and 42·5; in *C. dictua*, 100 to 47.

Cerithiopsis marmorata, *spec. nov.*

Shell elongately acuminate, *marbled* with white and brown, encircled by rounded cinguli and axially striated in the intervals. On the posterior whorls there are four cinguli; five on the penultimate; five on the body-whorl posterior to the periphery, with or without a slender one interposed between the first and second from the suture; the base with one cingulus in front of the periphery.

Dimensions.—Height, 15 (estimated); width, 3·25.

Localities.—Head of Great Australian Bight, Streaky and Fowler Bays, St. Vincent Gulf, Middleton, Cape Northumberland.

Affinity.—This species is more slender than *C. crocea*, and stouter than *C. purpurea*, but with a distinctive coloration. In ornament it approximates to *C. crocea*, but appears to have more cinguli on the body-whorl.

Bittium estuarinum, *spec. nov.* Pl. v., fig. 12.

B. pyramidale,* Tate, m.s.

* As the name *pyramidale* is already occupied in some closely-related genera, e.g., *Potamides* and *Cerithium*, I have thought it safer to select that of *estuarinum*, which is not in use for any species of the Family Cerithiidae, and thus avoid the possibility of duplication.

Shell elongate, stoutish; apex acute; whorls about twelve, convex, the uppermost whorls angulated medially, covered with a bluish-black to grey epidermis beneath which the colour is reddish; suture distinct. Base convex. Aperture circular, slightly angulated and effuse at the base of the columella; shining-black within; outer lip thin and arcuate; columella arched, obliquely excavated so as to form a slightly-raised border exteriorly. Operculum circular and multispiral.

Ornament consisting of depressed spiral threads, five or six on the penultimate whorl, and of slightly-arched plicæ (from eleven to fifteen on penultimate whorl) which terminate abruptly at the second lira from the anterior suture; the liræ as they pass over the plicæ produce nodular crenatures; the whole surface is sculptured with fine arcuate striæ. The plicæ vary much in strength, rarely obsolete; in the latter case the shell approximates to *B. Lawleyanum*, from which it is conspicuously distinguished by its elongate form, less dense, and more thread-like spiral ornament. The base is concentrically ridged and transversely striated.

Dimensions.—Of a large specimen, length 22, major diameter of base, 5; of a medium-sized specimen, length 17, major diameter of body-whorl, 4.5. The proportion of length to the basal diameter varies from 100 to 22.5 to 100 to 33; but the extremely-broad forms are rare.

Habitat.—Living on the mud, between tide-marks, Port Adelaide Creek; Franklin Harbour; in shallow water on *Zostera* in Lake MacDonald, West Coast.

Affinity.—The plicate ornament without distinctive granulation reduces the comparison of this species to a very few congeners; but the non-plicate supra-sutural area, the number of the spiral liræ and the elongate form separate it from all of them.

***Torinia foveolata*, spec. nov.** Pl. i., fig. 13-13a.

Shell small, depressed, slightly convex, semitransparent-white; whorls of rather slow increase, four, separated by an impressed suture, but not conspicuously channelled. Last whorl angulated at the periphery; base rounded, profoundly and widely umbilicated. Aperture quadrately rounded.

Ornament of penultimate whorl consisting of four spiral riblets (of which one in the anterior-third is the strongest), and slightly-oblique transverse threads (nearly as stout as the largest of the spirals); the intersection of the spiral and transverse threads produce rhombic pits, within which are a few spiral striæ; the largest spiral riblet is delicately granulated at the intersections with the transverse threads. The body-whorl has a gemmulated keel, the medial portion of the upper surface has two

gemmulated ribs of about equal magnitude, at the suture there is a double smaller rib, and there is a finer one posterior to the periphery. The transverse riblets of the penultimate whorl with increasing revolution of the whorls become more slender and closer together, and thus the fenestrated ornament is somewhat obscured on the front part of the body-whorl. Below the periphery there are about five revolving equal-sized ribs, more or less gemmulated at the intersections of transverse sigmoidal threads, the one margining the umbilicus most conspicuously so. The umbilical wall has about five flat threads crossed by lamella-like striae.

Dimensions.—Height, 1.75; basal diameters, 4.25; and 5 (*vix*); major diameter of umbilicus, 2.5 (*vix*).

Localities.—Three dead shells, Aldinga Bay and Semaphore.

Affinity.—The conspicuous oblique ribbing and very wide umbilicus are characters which separate this species from the majority of its congeners. Its near allies are *T. aspera* and *T. fenestrata*, but it is flatter than the former, and more angulated than the latter; unacquainted with either, except by Tryon's figures and descriptions, a critical comparison is not possible.

Turbo (Astraliium) rutidoloma,* *spec. nov.* Pl. i., fig. 9.

Shell lenticular-conoid, about equally sloping above and below from the angular periphery; whorls four and a-half, flat, the embryonic one and a-half whorls fimbriated at the suture; umbilicus minute. Operculum as in *T. aureus*.

Upper-surface of body-whorl with a stout and a broad lira next the suture, which is transversely crenulate-ridged; periphery bluntly angled by a slightly compressed convex keel, which is obsoletely crenulated; between the keel and the sutural band are three granulose liræ about equidistant and equal-sized but the anterior one is close to the keel (in senile specimens a small lira is interposed next the suture, and there is a tendency in the granules of the liræ to become somewhat confluent); the intervals between the liræ are smooth. The base has four granulose liræ; the umbilical region is bounded by a broad ridge, which is broken-up into claviform tubercles obliquely disposed.

Colour greenish-brown in living specimens, flesh-coloured with rufous liræ and darker-tinted at the suture and keel in beach-examples. The interior of the aperture of living examples is greenish and of a pearly lustre.

Dimensions.—Height, 7.5; basal diameters, 10.5 and 12.

Localities.—At low tides, Moonta Bay (*Messrs. Maughan and McDougall*); in eight fathoms, Hardwicke Bay (*Dr. Verco*).

* In allusion to the wrinkled border at the anterior suture.

Affinity.—This species has a general resemblance to *Astralium aureum*, but is more depressed, umbilicated, and has a different ornamentation and coloration.

Clanculus consobrinus, *spec. nov.* Pl. i., figs. 1, 1a.

Shell perforate, depressed, pinkish-brown, sparsely black-dotted. Spire low-conic, apex acute; whorls five, suture subcanaliculate; body-whorl obtusely bi-angular at the periphery, base somewhat convex. Aperture rounded, oblique; outer and basal margins liriate-dentate. Columella oblique, neither tortuous above nor entering the umbilicus; its front edge plain, except a tooth at the base. Umbilicus wide and deep, its margin crenate-dentate.

Ornament of penultimate whorl of four equal and equidistant granulose liræ, and obliquely-transverse raised threads; of the body-whorl, a small granulose lira interposed between the third and fourth, anterior to the fourth are two smaller equally-distant from one another, the fifth is slightly granulose, whilst the sixth, which is at the periphery, is broad and obtuse; the interspaces between the liræ are faintly spirally striate; base with seven concentric liræ, the inner ones subgranose, the outer ones plain, with a few coincident striæ in the interspaces.

Dimensions.—Height, 8; basal diameters, 14 and 12 mm.

Localities.—Cast-up: Holdfast and Aldinga Bays, S. Yorke Peninsula; Head of Great Australian Bight (several examples). Dead shells dredged in Yankilla Bay, Backstairs Passage, and Corney Point in 30 fathoms (*Dr. Verco*).

Affinity.—This species has the form of *C. plebeius*, but I cannot attach it to any of its recognisable varieties or to any described congener. It is slightly more depressed than *C. plebeius*, whilst it attains nearly twice the size; the umbilicus is deeper, reaching to or beyond the junction of the penultimate and last whorls. The absence of the trenchant tessellated sculpture and the equidistant granular liræ of the posterior area of the body-whorls are distinctive characters, which are furnished by the ornament.

Clanculus euchelioides, *spec. nov.* Pl. i., fig. 8.

Shell turbinately conchoid, somewhat solid, opaque, concolorous (reddish); whorls about six, the ordinary spire-whorls separated by a canaliculate suture and flattened posteriorly, the last whorl convex in the anterior-third; base flatly convex, falsely umbilicated, the columella entering the umbilical depression, which is shallow and moderately narrow. Aperture oblique, rhomboid-oval; outer lip slightly depressed at the suture; outer and basal margins thin, liriate, and iridescent within (the liræ not extending to the margin). Columella oblique, straight, rib-like, with an attenuated keel elevated into a tooth-like prominence at the base, and separated from the basal margin of the aperture by a deep

notch. (Immature shells are without the columella-characters). Operculum multispiral.

Ornament of early spire-whorls consisting of three plain cinguli, the posterior one smaller than the others; of penultimate whorl with a riblet between anterior suture and first cingulus, between first and second, and second and third cinguli; of last whorl with seven cinguli on the upper-surface and interposed riblet here and there, base with seven cinguli, with an interposed riblet in the one or two exterior sulci; there is no conspicuous rib margining the umbilical area. The whole surface of the shell (except apical whorls) is sculptured with fine close oblique striae, which pass over the principal cinguli, which occasionally show a tendency to granulation.

Dimensions of a large specimen:—Height, 6.25; basal diameters, 5.75 and 6.5.

Localities.—Living at low tide-mark, under stones, Moonta Bay (*MM. Maughan and McDougall*); off Rapid Bay Head, in 10 to 12 fms.; off Corney Point, in 30 fms., and off Rickaby (*Dr. Verco*).

This *Euchelus*-like shell, which has been known to me for several years, I had thought might be immature; but it is only recently that I have had the opportunity of studying a large suite of specimens, which permits me to alter my opinion. The simplicity of the apertural and umbilical characters combined with those afforded by the ornamentation are such as to render unnecessary a comparison with other species of the genus.

***Thalotia neglecta*, spec. nov.** Pl. i., fig. 6.

I separate under the above name a shell, which has been confounded with *T. chlorostoma* with which it agrees in its arcuate and truncated columella, but is without the acutely-carinated periphery, and thus establishes a passage from *Thalotia* to the section *Odontotrochus*, though it has more of the facies of the latter than the former.

The columella, as in *T. chlorostoma*, is sharply defined by a coincident umbilical depression. The species differs by the absence of the supra-sutural carina, its slightly convex whorls, and less elevated spire.

The whorls, eight in number, have the spiral and transverse ornament, as in *T. chlorostoma*. The colour is usually brown or yellowish, spotted with white or brown-white blotches, and more or less with white and brown above the suture and on the periphery, rarely unicolorous (greenish-yellow).

Adult specimens, as shown by the thickened outer lip bevelled to a sharp edge, have been dredged in life on Troubridge Shoal, St. Vincent Gulf, in six fathoms, by Mr. Matthews. Taken abundantly, living and dead, in St. Vincent and Spencer Gulfs at various depths from 5 to 15 fathoms (*Dr. Verco*).

Dimensions.—Height, 18 ; basal diameters, 13·5 and 15.

A single specimen of what may prove to be a distinct species allied to *T. chlorostoma*, taken at Geographe Bay, W. Australia, is of a buff colour, except the red-tinged apical whorls, the oblique striæ are obsolete, and the revolving liræ are replaced by linear sulci.

Calliostoma spinulosum, *spec. nov.* Pl. i., fig. 7.

Shell small, imperforate, broadly conical, pale reddish-yellow with small white blotches ; whorls six and a-half, slightly imbricating ; base almost flat.

Ornament of penultimate whorl consisting of three spiral liræ crossed by equal-sized, stout, slightly obtuse, oblique ridges ; the interstitial pits deep, rhombic, smooth ; the points of intersection of the spirals and oblique costæ are produced into spiniform granules. The liræ diminish in size from the anterior to the posterior suture ; the oblique ridges being as stout as the median spiral. The spiral ridges on the body-whorl are increased by a slender lira interposed between the first and the second, and by a subperipheral lira nearly equal in size to the peripheral one, the two together forming a truncated sulcated keel. Base with about six concentric liræ, somewhat depressed, subacute, and showing a tendency to subgranulose, crossed by strong radial growth-lines.

Dimensions.—Height, 5 ; basal diameters, 4 and 4·5.

Locality.—Moonta Bay ; one living example received from the late Mr. McDougall.

Affinity.—This exquisite little shell is readily distinguished from all congeners, except *C. rubropunctatum*, A. Adams, by its clathrate and echinate ornament ; from that species it would seem to differ by its subimbricating whorls and fewer liræ.

Euchelus fenestratus, *spec. nov.* Pl. i., fig. 2.

Shell imperforate, oval-conic, solid, thick ; spire conical, whorls four and a-half, suture canaliculate by reason of the approximation of the infra- and supra-sutural liræ. Aperture rounded, oblique ; outer margin lirate, basal margin tuberculate. Columella concave, its margin sharp and nearly straight, furnished with a sharp tooth at the base succeeded by a deep basal notch ; the first tubercle on the basal margin is equal in size to the columellar denticle.

Ornament of strong spiral ribs decussated by less elevated oblique ribs, which cut the interstices into rhombic pits ; at the intersections the spiral ribs are subnodulose. On the penultimate whorl there are three liræ, the posterior one of which is much smaller than the others ; the latter by their prominence give the whorl a biangulate section. The body-whorl, the convexity of which is only slightly interrupted, has six liræ, of the three in

front of the periphery the posterior one is nearly as prominent as the peripheral one.

Colour white, with spots of reddish-brown on the liræ, grouped in nearly axial lines across the anterior-half of the penultimate whorl, and across the body-whorl to its base.

Dimensions.—Height, 4; diameter, 3·25.

Habitat.—West Australia, exact locality not known. (Three examples in my collection.)

Affinities.—In its clathrate ornament, elevated spire, and biangulated whorls, this new species resembles *E. angulatus*, Pease, *E. pauperculus*, Lischke, *E. scrobiculatus*, Soubervie, but differs from them *inter alia* by its unidentate columella. *E. instrictus*, Gould, may perhaps approach nearer, but the Australian shell has fewer liræ, and the transverse ornament is closer and finer; and though the mouth-aperture is similar, yet the Polynesian shell is deeply umbilicate.

***Euchelus pumilio*, spec. nov.** Pl. i., fig. 3.

The shells to which I give this name are closely related to those of the foregoing species, *E. fenestratus*, they differ by their more rapidly-increasing whorls, in having two stout liræ on the penultimate-whorl, five on the body-whorl, the stouter and more distant transverse riblets which, moreover, are less oblique or nearly axial in direction, and by the feebler nodosities on the liræ. The colour-spots are usually confluent on the axial riblets.

Dimensions.—Height, 3; diameter, 3·25.

Localities.—Fowler Bay and Head of Great Australian Bight. (Six examples in my collection.)

***Euchelus vixumbilicatus*, spec. nov.** Pl. i., fig. 4.

Shell similar to *E. scabriusculus*, but relatively broader and the whorls more convex. The penultimate whorl has four narrow subequal and equidistant cinguli latticed by nearly equally thick oblique costæ, which produce slight granulations on the cinguli and divide-up the surface into rhombic spaces. This open latticed ornament, though present in *E. scabriusculus*, is almost concealed by the closeness of the thick cinguli, which are densely studded with granules. There are fourteen beaded cinguli on the body-whorl between the beaded umbilical border and the suture. The colour is white, with pink spots; but the shell has not been seen in a fresh state.

Dimensions.—Height, 5·5; basal diameters, 5·5 and 5.

Localities.—West coast of South Australia (many examples); Hardwicke Bay (one example); also West Australia.

***Euchelus anneetans*, spec. nov.**

This species has the same shape as the preceding, but differs in the following particulars:—The penultimate whorl has five

beaded cinguli fenestrated in the sulci; the last whorl usually with ten cinguli; there is no umbilicus and no prominent beaded cingulus bounding the umbilical region.

Dimensions.—Height, 5 (*vix*); basal diameters, 4 and 5.

Habitat.—West Australia; exact locality not known (six examples).

***Euchelus ampullus*, spec. nov.** Pl. i., fig. 5.

Shell globose-conic, imperforate in the young, narrowly umbilicated or reduced to a fissure in the adult; whitish, spotted with red on the revolving ribs; spire-whorls quadrate, separated by a linear suture; last whorl convex, except a little flattening at the suture.

Ornament of penultimate whorl consisting of three equally thick, obtuse, and plain cinguli, separated from one another and from the sutures by nearly equal interspaces, with or without a small riblet in each interval; all over regularly clathrate, the interstitial pits narrowly oblong. Last whorl with about eight cinguli, clathrate in the intervals; the supra-peripheral intervals with a riblet; the four basal cinguli granulose.

Aperture roundly oval, outer and basal margins smooth within; columella arcuate, slightly explanate concave, edentulous.

Dimensions.—Height, 11.5; basal diameters, 9.25 and 11.5.

Locality.—Probably Cambridge Gulf, N.W. Australia (several examples).

Affinity.—This species will fall into Pilsbry's Section *Hybochelus*. Of the four described species *E. Delpreti* is the only one with the basal diameter equal to the height; in the others the proportion of the height to the diameter is 100 to 120–130. *E. fossulatus* has four principal line on the penultimate whorl. *E. mysticus* is imperforate. In *E. cancellatus* and *E. Delpreti* the number of the basal cinguli is greater than in the present species, the latter having two cinguli on the penultimate whorl.

EXPLANATIONS TO PLATE I.

- Fig. 1-1a. *Clanculus consobrinus*, Tate. 2 x.
 “ 2. *Euchelus fenestratus*, Tate. 5 x.
 “ 3. *Euchelus pumilio*, Tate. 2 x.
 “ 4. *Euchelus vixumbilicatus*, Tate. 3 x.
 “ 5. *Euchelus ampullus*, Tate. 1.5 x.
 “ 6. *Thalotia neglecta*, Tate. 1.5 x.
 “ 7. *Calliostoma spinulosum*, Tate. 3 x and magnified ornament.
 “ 8-8a. *Clanculus euchelioides*, Tate. 3 x (*vix*).
 “ 9. *Turbo rutidoloma*, Tate. 1.5 x.
 “ 10. *Sipho* (?) *mimeticus*, Tate. 2 x.
 “ 11. *Columbella* (*Mitrella*) *vineta*, Tate. 2 x.
 “ 12. *Bittium estuarinum*, Tate. Nat. size, and magnified ornament.
 “ 13-13a. *Torinia foveolata*, Tate. 3 x.

SOME ADDITIONS TO THE LIST OF THE MARINE GASTROPODA OF SOUTH AUSTRALIA.

By PROFESSOR RALPH TATE.

[Read June 6, 1893.]

In the recently published "Hand List of the Aquatic Mollusca inhabiting South Australia," Mr. Adcock, the compiler, has made me responsible for some specific names which are in reality only manuscript ones. In the foregoing paper I have established the major part of those names by appropriate diagnoses and figures.

Whilst the "Hand List" was passing through the press I had not the opportunity of consulting my cabinet, and as a consequence some species escaped notice; and, moreover, in the meanwhile some species have been added to the fauna through the dredging operations conducted by Dr. Verco during January of this year.

Briefly, then, this communication consists of addenda and corrigenda to the "Hand List," and the numerals in brackets prefixed to the species-names are in correspondence with those in that publication.

(3). *Murex umbilicatus*, Ten.-Woods.

Trophon umbilicatus, T.-Wds., Proc. Roy. Soc. Tasmania, for 1875, p. 135 (1870).

This species is distinct from *M. octogonus*, Q. & G., as pointed out by Mr. Brazier, an opinion with which we concur. *M. scalaris*, Adams, is an older name, but as it is preoccupied for a well-known fossil of the Piedmontese Pliocene, Tenison-Woods' name appears in substitution.

Sipho (?) *mimeticus*, Tate (ante p. 189).

(39). *Latirofuscus nigrofuscus*, Tate.

Since the publication of my diagnosis and figure of the above-named species, I have examined several private collections of Tasmanian shells in Hobart and Launceston and the local collection in the Hobart Museum. In these I find the names of *Fusus Spiceri* and *F. Legrandi* indiscriminately applied; and I am not sure that I have seen the type of either. But from Woods' description, I do not hesitate to select *F. Spiceri* as the one which is synonymous with my *Latirofuscus nigrofuscus*, the other shell I consider to be a young state of *Siphonalia sulcata*. The specimens received from Mr. Legrand, which were said to have

been identified by Tenison-Woods, undoubtedly belong to *L. nigrofuscus*. Had I been aware of this before publication I would have adopted Tenison-Woods' specific name. Now, the question is whether under the circumstances it should have preference. I think not, as the diagnosis, unaccompanied by a figure, is inadequate to define the species; the most important character—the plicated columella—was overlooked, though the apex is described as mammillated, a character of the highest classificatory value in the Family Fusidæ. Had Woods correctly interpreted the columella-characters, he would probably have referred the species to *Fasciolaria*, in which case it might have been recognised by his diagnosis.

(46). *Cantharus rubiginosus*, *Reere*.

(74). *Mitra rufocincta*, *A. Adams*.

This includes (82) *Mitra vineta*, Adams (not Angas).

(83). *Mitra Legrandi*, *Ten.-Woods*.

(101). *Ancillaria Petterdi*, *nom. mut.*

A. obtusa, Petterd, Proc. Roy. Soc. Tasm. for 1885, p. 342, (1886), *non* Swainson.

A. obesula, Tate, *non* Deshayes.

(112). *Columbella vineta*, *Tate* (ante p. 190).

Clathurella Brenchleyi, *Angas*.

Off Corney Point in 17 fathoms, and off Rickaby in six fathoms, Spencer Gulf; Yankalilla Bay in 15 to 20 fathoms and off Rapid Head, St. Vincent Gulf (*Dr. Verco*). Also Victoria! and N.S. Wales.

(138). *Mangilia spurca*, *Hinds*.

This includes (141) *Clathurella crassina*, Angas.

(152). *Cancellaria purpurinaeformis*, *Valc.*

By a clerical error the species name was written *paludinaeformis*; (151) *C. laevigata* is probably the same.

Calyptrea pellucida, *Reere*.

Icon. Conch., Mon., *Trochita*, t. 1, f. 2.

Dredged in life in St. Vincent and Spencer Gulfs by Dr. Verco (many examples). Also New South Wales, N. Australia, S. Papua, Phillipines.

Toreula runcinata, *B. Watson*.

Turritella runcinata, Voy. Challenger, t. 30, fig. 3, p. 475.

South Australian examples of this species agree in all details with Watson's description; but they attain to a length of 44 mm., and diameter of 13 mm.; the fissural notch is triangular

with rounded basal angles and acute apical angle, its height is 4 mm. An individual variation has the anterior carina conspicuously elevated.

Dredged in life, in 15 fathoms, in Backstairs Passage, by Dr. Verco (several examples). The "Challenger" specimens were obtained from 38 to 40 fathoms, off east Moncoeur Island, Bass-strait.

Torinia foveolata, Tate (ante p. 191).

(236). *Bittium estuarinum*, Tate (ante p. 190).

(228). *Cerithiopsis marmorata*, Tate (ante p. 190).

Rissoina (Phosinella) horrida, Garrett.

R. australis, Sowerby.

Cape Northumberland in shell-sand (one example). Also Queensland and Viti Islands.

(263). *Rissoina (Phosinella) toxopleura*, (*nom. mut.*).

R. lirata, Angas, *non* Gould (1861).

I have specimens from King George Sound.

Potamopyrgus niger, Quoy and Gaimard.

Paludina nigra, Voy. Astrolabe, t. 58, figs. 9-12.

An estuarine mollusc inhabiting Port Adelaide Creek, Coffin Bay; also in Tasmania; 267 is, and 268 probably, congeneric.

(299). *Phasianella variegata*, Lk.

I do not consider *P. Angasi* (300) to be specifically distinct.

(307). *Astralium rutidoloma*, Tate (ante p. 192).

(316). *Clanculus consobrinus*, Tate (ante p. 193).

Clanculus euchelioides, Tate (ante p. 193).

(432). *Thalotia neglecta*, Tate (ante p. 194).

Calliostoma spinulosum, Tate (ante, p. 195).

Calliostoma ciliaris, Menke.

Trochus ciliaris, Moll. Nov. Holl., p. 17 (1843); Tryon, Man. Conch., vol. XI., p. 338.

Of this, one of the largest species of the genus, measuring one inch by one and a-quarter, three living examples were dredged in Spencer Gulf by Dr. Verco. Menke records it from the north-west coast of Australia, without any particular locality.

Calliostoma australis, Broderip.

Tryon, op. cit., p. 348, t. 18, f. 23.

This species belongs to S.W. coast of W. Australia, but has been dredged off Normanville, St. Vincent Gulf, by Dr. Verco.

(360). *Euchelus scabriusculus*, Fischer.

Trochus scabriusculus, Fischer, Coq. Viv., p. 374, t. 114, f. 2, 1880: *Euchelus (Herpetopoma) scabriusculus*, Pilsbry, Tryon's Man. Conch., vol. XI., p. 445, t. 38, f. 12, 1889; *Euchelus Tasmanicus*, Ten.-Woods, Proc. Roy. Soc. Tasm. for 1875, p. 152 (1876).

There can be no doubt that the shell which is known to the conchologists of N.S. Wales as *E. scabriusculus* is identical with *E. Tasmanicus*. Though I must admit that the figure of it given by Pilsbry, whether original or copied from Fischer is not stated, is not much like Woods' shell, which approaches more to the figure of *E. Fischeri*. *E. Tasmanicus* has the multispiral operculum attributed by Pilsbry to *E. scabriusculus*, which uniquely represents his section *Herpetopoma*.

The question arises as to priority of name. The description given by Tenison-Woods lacks that minuteness which is essential to specific definition; Fischer's diagnosis is much more detailed, and though certain good characters are omitted, yet is worthy of acceptance. The first employment of the species-name, *scabriusculus*, is traceable to Angas in his list of N.S. Wales Marine Mollusca, P.Z.S., 1867, p. 215, where it is alluded to as a M.S.-name in Coll. Cuming by H. Adams and Angas, with the remark, "a very small species differing from *E. baccatus* in its cancellated sculpture and being umbilicated; length, 2 lines." These comparative characters are sufficient had we the two species only before us, but they are inadequate to locate the species among congeners. However, I think the best interests of conchology will be served by employing Angas' name, though perhaps a rigid application of the law of priority would require the substitution of Tenison-Woods' name.

Based upon four Tasmanian examples, I have drawn the following brief description:—The colour is ashen-reddish beneath a thin epidermis (I fail to recognise the red spots disposed in oblique lines mentioned by Ten.-Woods). There are four cinguli on the penultimate whorl, in one example a small cingulus between the third and fourth, which are larger than the other two; the last whorl has eight cinguli between the beaded umbilical border and the suture.

The S. Australian examples which I refer to, *E. scabriusculus*, have never less than five cinguli on the penultimate whorl, sometimes all equal, in others the medial one slender; on the last whorl the cinguli vary from ten to thirteen, more frequently twelve. The colour is bluish-grey to reddish-brown, whilst the beaded umbilical margin is conspicuously white.

(361) *Euchelus vix-umbilicatus*, Tate (ante p. 196).

(362) *Euchelus pumilio*, Tate (ante p. 196).

Subemarginula stellata, A. Adams.

Clypidina stellata, P.Z.S., 1851, p. 87; Reeve, Icon. Con., t. 8, f. 56; Tryon, Man. Conch., vol. XII., p. 283, t. 29, f. 33.

St. Vincent Gulf in shell-sand (two examples); also N.S. Wales.

Patella aculeata, Reeve.

Conch. Icon., f. 90; Tryon, Man. Conch., vol. XIII., p. 100, t. 62.

Rosetta Head (dead shells); also N.S. Wales and Tasmania.

Patella stellaeformis, Reeve.

Conch. Icon., figs. 48, 53; Tryon, *op. cit.*, p. 98, t. 17, f. 25, &c.

Rosetta Head and Fowler Bay; also N.S. Wales to Japan.

Acmaea saccharina, Linne.

Var. stellaris, Quoy and Gaimard, Voy. Astrolabe, t. 71, f. 1-4.

Fowler Bay and Wallaroo Bay; also Tasmania, and New South Wales, &c.

Acmaea Jacksoniensis, Reeve.

Patella, Icon. Conch., f. 127; Tryon, *op. cit.*, t. 42, f. 71-75.

P. Gealei, Angas, is, in my opinion, a synonym.

(405). Ischnochiton Haddoni, Pilsbry.

Tryon's Man. Conch., vol. XIV., p. 88, t. 22, figs. 67-73.

The Australian examples of the so-called *I. longicymba* are shown by the above-named author to differ specifically from the New Zealandian species of that name.

Ischnochiton (Ischnoradsia) australis.

Chiton australis, Sow., Mag. Nat. Hist., 1840, Conch. Illus., f. 46; Reeve, Con. Icon., sp. 10; *Lepidoradsia australis* (Sow.), Carpenter. Encounter Bay (two sps. in 1879); also Encounter Bay (*Dr. Perks*) and S Australia (*Mr. Adcock*) on the authority of Mr. Bednall.

A not uncommon shell in N.S. Wales and Tasmania.

Buccinulus affinis, A. Adams.

This N.S. Wales shell has occurred in a dead state at Moonta Bay.